

requesting all of the “bells and whistles” normally associated with the retail product, must be expected to pay for the service actually received.

VII. RECIPROCAL COMPENSATION MUST BE BASED ON
CARRIER COSTS
Notice Section II.C.5.

The 1996 Act provides that carriers using each others’ networks for termination of traffic must be compensated for such use. Based on the 1996 Act, the Notice seeks comment on several aspects of mutual compensation, including applicability of possible “bill and keep” scenarios (whereby each carrier is permitted to use the other carrier’s network for free). U S WEST’s comments are provided below.

First, the phrase “transport and termination of telecommunications” in Section 251(b)(5) encompasses two distinct concepts. Call termination is generally viewed as service from the last end-office switch to the end-user customer. This is the service for which there is no natural substitute.

Transport, on the other hand, is interoffice and would generally be interchangeable with similar network elements on tariffed access services. Mutual or reciprocal compensation issues involve primarily call termination. Transport rates are optional, are already unbundled, and can reasonably be purchased *via* other means. Transport should not be included in a mutual or reciprocal compensation scheme.

Second, reciprocal compensation rights and obligations apply to all LECs -- not just to incumbent LECs. The Commission cannot establish regulations for reciprocal compensation that burden only incumbent LECs.

Third, negotiating in this context includes choice of the point at which a LEC will deliver traffic for termination by the other LEC. U S WEST anticipates that it will be able to reach a mutually agreeable point for exchange of traffic with other LECs. In the absence of such agreement, however, each LEC should be entitled to specify the point at which it wants the other LEC to receive traffic for termination, even if each LEC receives and delivers traffic at a different location. Stated differently, each LEC should be permitted to determine the most efficient combination of its own and another LEC's facilities for termination of its own traffic on the second LEC's facility.

Fourth, absent an agreement, a LEC should not be allowed to bill another LEC for termination or transport utilizing the second LEC's own facilities. For example, LEC A cannot purchase a DS3 from LEC B and then bill that facility back to LEC B at a profit (or at DS1 rates) as part of reciprocal compensation.

Fifth, for the reasons set forth in U S WEST's Comments in CC Docket No. 95-185, bill and keep arrangements are economically wasteful arrangements.¹⁴³ Neither the Commission nor any state commission can mandate bill and keep arrangements without unlawfully taking the property of objecting LECs; or, at a

¹⁴³ See Comments of U S WEST, Inc., CC Docket No. 95-185, filed Mar. 4, 1996, at 24-53, wherein U S WEST generally discusses why bill and keep is imprudent and unlawful.

minimum, conducting a proceeding on the record that documents the traffic between LECs is roughly equivalent.

Sixth, as noted previously, the prices for all transport and unbundled network elements must cover the offering LEC's provisioning and operating costs, including a return on investment. The price of call termination, although stated somewhat differently in the Act ("additional costs of terminating such calls") must likewise conform to principles of economic rationality. Providers must also have the ability to negotiate call termination terms and prices which reflect the underlying cost drivers of their business operations.

For example, lack of accurate traffic engineering data can have a drastic cost impact on the cost of providing interoffice transport. The current public switched network is properly designed and engineered to existing traffic patterns. With the advent of local competition, traffic patterns will be altered dramatically, with significant impact on both tandem switches and interoffice trunk groups. If two new LECs, one of which provided accurate traffic engineering information and one of which provided none, requested interoffice transport (or network elements or call termination, for that matter) from an incumbent LEC, the cost of providing service to the latter would be considerably higher than the cost of serving the former. Recognition of cost factors is particularly important in the area of transport and termination of calls between carrier networks.

VIII. CONCLUSION

As made clear throughout these Comments, the appropriate role for the Commission, at least with respect to the initial implementation efforts under the 1996 Act, is one of leadership and guidance. Except for extreme cases, the Commission need not become embroiled in the details of the interconnection negotiation processes or in state regulatory regimes.

Where action is needed to address those extreme cases, however, the Commission should act swiftly. Because of the omni-jurisdictional nature of interconnection under the new rules, and the relationship of that interconnection to access, delay in addressing existing or new rules, regulations, or positions that compromise the ability of incumbent LECs to recover their costs of complying with the 1996 Act raise seriously legal and economic issues.

LECs are entitled to implement the 1996 Act in an economically-rational manner and to come through the interconnection negotiation and network unbundling processes economically viable. Indeed, they are constitutionally entitled to such a result. In this regard, both the law and sound, reasonable economics support the same result.

To ignore sound economic analyses in implementing the 1996 Act could lead to uneconomic entry and exit; could compromise the integrity of the existing incumbent LEC operations; and could -- even if inadvertent -- re-create a monopoly in the local exchange. A review of the Harris and Yao Affidavit leaves one with the

inescapable conclusion that AT&T's position, if adopted, would adversely impact on the development or realization of full and fair competition in the local exchange market.

The Commission need not get into the details of the interconnection negotiations or the network unbundling actions, but it should establish broad guidelines to forestall predictable impediments to the accomplishment of either. In doing so, the Commission must recognize the differences, yet inextricable relationships, among the Act's different types of interconnection and their relationship to interstate access. Because of the clear threat of uneconomic pricing anomalies, unsustainable in a competitive environment, access and interconnection pricing must be harmonized, with some reform required almost immediately (e.g., CCL and RIC reformations to flat-rate charges, elimination of the ESP exemption), and others proceeding on the heels of access reform.

By focusing on the economics, U S WEST is confident that the Commission will provide the kind of leadership necessary to implement the 1996 Act in a fair

and constitutional manner. The public interest requires no less and the Commission can offer no more.

Respectfully submitted,

U S WEST, INC.

By: Robert B. McKenna by *DSP*
Robert B. McKenna
Kathryn Marie Krause
James T. Hannon
Suite 700
1020 19th Street, N.W.
Washington, DC 20036
(303) 672-2861

Its Attorneys

Of Counsel,
Dan L. Poole

May 16, 1996

EXHIBIT A

STATE OF CALIFORNIA)
)
EMERYVILLE)

SS: AFFIDAVIT OF ROBERT G. HARRIS
AND DENNIS A. YAO

ROBERT G. HARRIS and DENNIS YAO, of lawful age, first duly sworn
deposes and says:

1. We are Principals at Law and Economics Consulting Group located in Emeryville, California, and have caused to be prepared written testimony and exhibit in support of U S WEST Communications Inc. in CC Docket No. 96-98.
2. Such transmittal is true and correct as we verily believe.

Further affiant sayeth not.



Robert G. Harris

Subscribed and sworn to before me this 15th day of May, 1996.




Kathy A. Stephan
Notary Public

District of Columbia ss:


Dennis A. Yao

Subscribed and sworn to before me this 16th day of May, 1996.


Ramona D. Hall
Notary Public

Ramona D. Hall
Notary Public District of Columbia
My Commission Expires: Oct. 14, 1998

**FEDERAL IMPLEMENTATION OF THE
TELECOMMUNICATIONS ACT OF 1996: COMPETITION IN
THE LOCAL EXCHANGE**

A Report by Robert G. Harris and Dennis A. Yao

May 16, 1996

Prepared for US WEST, Inc.
CC Docket No. 96-98

A. INTRODUCTION AND EXECUTIVE SUMMARY

The ultimate goal of the Telecommunications Act of 1996 is to ensure a wide range of high quality, low-cost, readily available, technically advanced telecommunications services for American consumers, business enterprises, schools, hospitals, government agencies and non-profit organizations. This goal can only be achieved by promoting investment and continuous technological progress in the nation's communications infrastructure: it can not be achieved merely by allowing competitors to buy existing network facilities on an unbundled basis or by reselling existing services bought from local exchange carriers on a wholesale basis. It is therefore imperative that the Commission adopt rules in this proceeding that promote efficient competition; facilitate the innovation, deployment and adoption of new technologies and services; and provide adequate incentives for expanding investment in the nation's telecommunications and information infrastructure. Conversely, it would be directly contrary to these policy objectives for the Commission to adopt policies that encourage inefficient entry, distort the competitive process by creating or enlarging artificial advantages of some competitors, or reduce the incentives for innovation and investment by incumbent and potential new service providers.

The appropriate policies for the transition to full competition should recognize the important role that U S WEST and other LECs will continue to play in that transition. Over the past decade, investments by local exchange carriers have been essential to the development of competition in interexchange services. For example, without substantial investments in improved switching capabilities, there would have been no "equal access" for IXC's. To promote equal access, this Commission specifically adopted policies that provided the stream of revenues required to fund those investments. The Commission should not adopt policies requiring enormous investments by LECs, without ensuring the recovery of the revenues needed to cover the costs of those investments. For an interim period of several years, U S WEST and other LECs will provide key ingredients to the "network of networks," including a means of interconnection and interoperability across the rapidly growing number of competing and cooperating communications networks. Provision of these ingredients and continued investments

in the existing public telecommunications network will require enormous expenditures. Thus, it is crucial to the nation's interest in the communications infrastructure and in competition that U S WEST be allowed to compete on even terms.

As a matter of first principle, then, the Commission's rules should promote allocative, technical and dynamic efficiency. At all costs, the Commission should avoid policies that may create the appearance of competition – e.g., by increasing the number of competitors in local exchange services – but that, in the long run, actually inhibit real competition by creating conditions that ensure the success of a few large firms at the expense of many other potential competitors. Given the history of this industry, it is especially important that the Commission's rules do not recreate an industry in which one firm, such as AT&T, is allowed to dominate the marketplace. Yet, if the Commission were to adopt the policies advocated by AT&T, that would surely be the result. For example, if the Commission mandates that incumbents set the wholesale price of local exchange service below its full economic cost, as AT&T proposes, it runs the very real risk of creating an environment in which AT&T will dominate local exchange markets. Instead, the Commission should pay careful attention to the likely effects of its rules on the structure of future local exchange and other telecommunications markets, as these markets will be powerfully influenced by the results of this proceeding.

It is critically important that the FCC's rules not distort competitive dynamics by favoring one class of competitor or one type of technology over others. With business units operating as (1) an incumbent LEC, (2) facilities-based new entrants (i.e., its cable companies), and (3) a wireless service provider in different jurisdictions, U S WEST has a particularly strong incentive to favor balanced competition so that its individual constituents can compete for local exchange business on their respective merits. Hence, U S WEST opposes policies that are biased in favor of either incumbents or entrants. A significant danger is that policies will be biased in favor of entrants, i.e., policies that promote "biased competition," but inhibit the development of efficient competition. To take one historical example, in surface freight transportation, regulatory policies greatly inhibited railroads from competing with motor carriers. Those policies caused enormous

inefficiencies and competitive distortions and literally drove many railroads into the ground. Only when many rail carriers were in bankruptcy did Congress and the Interstate Commerce Commission finally free the railroads from regulatory policies that had prevented them from competing with other modes of transportation. We certainly hope that the nation does not follow a similar path in telecommunications.

The Commission can increase the probability of success in local exchange competition by adopting the minimal set of rules necessary to ensure nondiscriminatory interconnection to the public switched network. Public policy remedies should be narrowly tailored to ameliorate the underlying economic problem they intend to address. The approach of tailoring the remedy to the problem is applied in antitrust and consumer protection law and policy, thereby avoiding unanticipated distortions in the market. By limiting its rules to those required to establish conditions that will allow fair competition to flourish for the benefit of consumers, the Commission will enable an expansion of voluntary choices based on buyers and sellers negotiating and transacting in markets, rather than on regulatory imperatives and restrictions.

In so doing, the Commission should recall the central role of prices in a market economy. If the prices of telecommunications services – whether at the retail or wholesale level, of unbundled or bundled services – do not cover their full economic costs, neither incumbent LECs nor existing competitors nor potential new entrants will have ANY incentive to invest in network facilities. It is well understood that competition promotes efficiency by driving prices toward costs; it is worth noting, though, that efficient competition will not develop and cannot succeed if some firms are required to sell outputs at prices that are below cost. Thus, whatever rules are adopted to determine wholesale, network element and interconnection prices, it is imperative that those prices be based on the full economic costs associated with providing each service. Economically incorrect pricing will reduce or distort investment in new technologies and systems and bias customer choices.

In addition to economically rational pricing, promoting the nation's interest in advanced telecommunications services requires policies that provide incentives and rewards for innovation.

The Commission should establish clear ground rules for determining which services should be proprietary and therefore not subject to mandatory wholesale/resale requirements. Competitive players in telecommunications markets must be able to protect their innovations through patents, copyrights, trademarks and similar mechanisms, otherwise incentives for the investment in and development of innovative telecommunications services will be stifled.

Finally, the Commission, in establishing interconnection and competition policies, should recognize that it will be constrained in its ability to correct errors caused by "interim" policies. Public policies become treated as "entitlements." It should be assumed that policies intended to be transitional will become semi-permanent and difficult to modify. Experience suggests that there is a reasonably high likelihood that a policy designed to be transitory will outlive its value and ultimately may interfere with the original policy goals. One way to prevent this from occurring is by adopting policies now that are adaptive, self-correcting and market-based.

These are the issues addressed in this report. In Section B, we outline the contours of the current conditions in local exchange services. Assuming nondiscriminatory access to call termination, we note that the major barrier to efficient competition in local exchange services is not the market power of incumbents, but the regulatory obligations and restrictions imposed on the incumbents. In other markets, policy makers would be suspicious that prices set below costs were predatory and prices set well above costs constituted "monopoly" overcharges. Yet, in local telephone services, such pricing is seen as a virtue and is, in any case, compelled by current rate regulations.

We also distinguish, in Section B, the three main forms of entry into local exchange services: facilities-based (i.e., the entrant invests substantially in its own network); partial facilities-based (the entrant invests in its own network but also rents the use of unbundled network elements from facilities-based carriers); and resale (the entrant resells services purchased from a facilities-based carrier). We caution that while policies that enable entrants to rent unbundled network elements or resell the services of facilities-based carriers can promote competition, such policies can also

inhibit the development of facilities-based competition by distorting entrants' "make or buy" decisions.

Section C addresses specific policy issues raised by the NPRM and offers comments on the policy choices facing the Commission and state regulatory authorities. We explain why only call termination, not other interconnection services such as transport and tandem switching, should be governed by the Commission. We iterate one of the most fundamental propositions of economics: that the prices of goods and services – including those designated as essential facilities or services – should be priced to recover their full economic costs. Thus, LEC prices should reflect the total service long run incremental cost (TSLRIC), shared and common costs, a reasonable profit, and, during a transition period, embedded costs. *Any costing standards or methodology used to set prices must, therefore, when applied to the entirety of U S WEST's services, give U S WEST an opportunity to recover its total costs.*

That principle should be consistently applied in telecommunications, in the pricing of retail local exchange services, in the wholesale pricing of local exchange servicing, in the pricing of unbundled network elements, and in the pricing of call termination. We further show why, given the complexities and alternative means of interconnection, no system of tariffed prices can possibly reflect all of the myriad variations in interconnection arrangements. Hence, private negotiations among the parties are the only conceivable method of achieving rational, efficient interconnection.

In Section D, we begin with a discussion of the interplay between telecommunications policies, the strategies of competitors and the likelihood of success in telecommunications markets. Our point is this: whether or not the Commission intends for its rules to affect competition dynamics – who wins and who loses – its rules surely will have that effect. Recognizing that fact, the Commission should strive for policies that are competitively neutral, that allow competitors to succeed on their relative merits, and that do not magnify the inherent advantages of major players such as AT&T to make competitive survival difficult for the diversity of other potential players.

To analyze the probable effects of alternative policy regimes, we construct and contrast the probable outcomes of two very different policy scenarios. In the "biased competition scenario," we assume that the LECs' retail prices are not restructured; wholesale prices are set below the cost of local exchange service (because they are established by discounts off of below-cost retail prices); excessive unbundling is required, with inadequate compensation to LECs for the cost of unbundling; and call termination and/or unbundled network elements are priced at or below incremental cost (e.g., by requiring "bill and keep"). The "efficient competition scenario" assumes instead the rapid adoption of economically rational retail pricing of exchange services through rate rebalancing; and prices of call termination, unbundled network elements and wholesale local exchange service cover full economic costs, reflect variations in costs, and enable LECs to earn a reasonable profit.

The expected outcomes of these two scenarios are quite different. By stressing unbundling and reselling over investment in facilities, policies that bias competition amplify the existing advantages of the major IXC's, facilitating their entry into local exchange services based on brand name and established customer bases. Customers' switching costs increase, reducing the vigor of price competition. Entry by smaller players is made more difficult, now and in the future. Investment in marketing and advertising is encouraged and rewarded, investment in new technologies, new services and local exchange facilities are discouraged.

Policies that promote efficient competition, in contrast, are likely to increase the dynamics of competition and the diversity of competitors. Efficient entry and innovation in technology and services are rewarded. The source of market success – and thus the grounds of competition – lie less in marketing than in offering better services at lower prices. Resale and unbundling would serve as complements to – rather than substitutes for – facilities-based competition. Hence, policies that promote efficient competition will promote investment in the nation's telecommunications infrastructure by the most efficient service providers. The Commission should be careful that the environment created by its final local competition rules emulates the

“efficient competition scenario” and not the “biased competition scenario” suggested by some provisions in the NPRM.

B. COMPETITIVE CONDITIONS IN LOCAL EXCHANGE SERVICES

1. Relevance of Competitive Conditions to Interconnection and Competition Policies

The development of entry-facilitating policies should focus solely on the asymmetries in public policies and differences in market power between competitors that impede fair competition and be based on sound economic principles of costs and pricing. To the extent that the adopted policies are not based solely on economic principles, but rather are intended to shape market structure by distorting prices or incentives to unduly favor entry or resale, such policies are likely to bias competitive outcomes and favor some competitors at the expense of others. Thus, in deciding rules for interconnection, the Commission should be concerned only with those advantages and disadvantages that stem from noncompetitive sources, such as essential facilities. While LECs have advantages stemming from their ownership of ubiquitous local-exchange facilities, they also have substantial disadvantages: they are encumbered with the costs of their carrier-of-last-resort and ready to serve obligations; they are required to price some services well below cost (e.g., residential basic exchange service) and other services well above costs; they are prevented from changing their prices quickly to meet market conditions and respond to competitors; and they cannot offer one-stop shopping to customers because of the continuing restriction on in-region interLATA services.

While the Commission should not adopt policies that are intended to neutralize natural competitive advantages, and should certainly not design its rules to favor certain competitors, it should be careful of how its policies may lead to unintended effects given the advantages and disadvantages of the likely competitors. As we will show in section D, some policies intended to promote resale competition in the local exchange market would also have the unintended effect of magnifying the rather substantial competitive advantages that AT&T and other IXC already have, compared to LECs and other facilities-based competitors. The Commission can best avoid

such harmful unintended effects by understanding current competitive conditions in local exchange service markets, how competitors have and will enter the markets, and how competition will develop differently in local exchange services than it did in long distance services.

2. Current Conditions in Local Exchange Services

Unless state regulatory policies and rate structures are dramatically changed, most of the potential benefits of competition will accrue to the high-usage customers who will be targeted by new entrants, at the expense of the majority of residential customers who generate low revenue or no revenue at all, and will therefore be neglected by new entrants. To see why this is so, compare some basic conditions characterizing competitive markets to the current conditions in local exchange services:

First, in competitive markets, no incumbent firm, however large its market share, is required to provide services to customers at prices below competitive levels, as are incumbent LECs. The policy of subsidizing certain classes of services will distort the entry strategies, product positioning, marketing decisions and investment behavior of new entrants, some of whom will attempt to avoid serving such customers, or serve them only if subsidized by the incumbent (e.g., by purchasing unbundled network components at prices below full cost).

Second, in competitive markets, no incumbent is required to charge prices above a competitive level as a means of cross-subsidizing customers or services that are priced below competitive levels. The policy of requiring some LEC customers and/or services to cross-subsidize others amounts to a tax on those customers and/or services providing the subsidy. This implicit tax distorts the competitive process because, by purchasing services from a new entrant who is not required to cross-subsidize, the customer can avoid the tax in the LEC's prices.

Third, in competitive markets, no incumbent firm is required to charge the same price across all customers in a geographic area when there are substantial differences in the cost of providing services across that area. The policy of statewide price averaging of local exchange service will distort entry and competition by providing targets of opportunity for entrants, based not on the economics of supply and demand, but on regulatory arbitrage.¹

Fourth, in competitive markets, no incumbent firm is subjected to extensive regulation of prices and service offerings while its competitors are free of most such regulations. The

¹ Regulatory arbitrage involves exploiting regulated rates or other regulations for private gain (e.g., buying services that were intended for one type of usage and using them for another, thereby avoiding a higher regulated charge, or targeting geographic areas whose prices are held substantially above cost by regulations requiring geographic price averaging.)

asymmetric regulation of LECs and new entrants on both the state and federal level would distort competition and handicap LECs by inhibiting them from pricing to market conditions, offering new services expeditiously or responding to competitors' initiatives.

Fifth, in competitive markets, no incumbent firm is required to unbundle its products or services and sell them to its competitors, except in the extremely rare circumstance where a competitor can prove that a service is an "essential facility," i.e., the sale of that service by a monopoly provider to its competitors is essential for competition. Note that in competitive markets, public policies do not require unbundling by an incumbent even one with a very high market share merely because its competitors request such unbundling.

Sixth, in competitive markets, no incumbent firm is required to provide service in areas or to customers simply because no other competitor is willing to provide service there. "Carrier-of-last-resort" and "ready to serve" obligations distort competition because they impose the costs of those obligations on incumbents, while others are allowed to avoid them by serving only those customers they choose to serve, when they want to serve them. Worse, if entrants are impose with a nominal obligation to serve, they may meet that obligation by purchasing service at wholesale rates from the LEC. These ready-to-serve and carrier-of-last-resort obligations, combined with the unbundling requirements of the Telecommunications Act, impose substantial new business risks on U S WEST.

In sum, there are fundamental differences between the competitive conditions enumerated in economics textbooks and those prevailing in local exchange services markets today. Unless and until these differences are moderated by regulatory reform, many consumers of local exchange services will not realize the benefits of competition.

3. Competitive Entry into Local Exchange Services

There are three main forms of entry into local exchange services: facilities-based (i.e., the entrant invests substantially in its own network); partial facilities-based (the entrant invests in its own network but also rents the use of unbundled network facilities from facilities-based carriers); and resale (the entrant resells services purchased from a facilities-based carrier). While policies that enable entrants to rent unbundled network facilities or resell the services of facilities-based carriers can promote competition, such policies can also inhibit the development of facilities-based competition by distorting entrants' "make or buy" decisions. If the prices of unbundled network elements or the wholesale prices of services are set too low, the incentive to invest in facilities will be reduced or even eliminated. Moreover, policies that are biased toward excessive unbundling or resale will make it difficult for facilities-based competitors to succeed, even assuming they invest

in the nation's infrastructure. For example, U S WEST Media Group intends to spend millions of dollars to upgrade the facilities of its cable subsidiary in Atlanta in order to provide telecommunications services to residential customers in competition with BellSouth. How can U S WEST Media Group possibly compete if AT&T is allowed to purchase and resell BellSouth's local exchange services at prices that do not even cover costs?

Moreover, unless this Commission exercises national leadership and extreme care, the pervasive effects of state franchise regulation of local exchange carriers, and the substantial cross-subsidy flows across customers, services, and geographic areas will induce imbalanced competition and heighten cream-skimming in local exchange services. By "imbalanced competition" we refer to the situation in which one competitor is regulated by different standards than others. For example, U S WEST is heavily regulated, while new entrants are not. New entrants would have far greater flexibility in setting prices, offering new services, and otherwise meeting customers' demands. "Cream-skimming" refers to the selective entry and targeted marketing efforts of some competitors seeking to serve high-profit customers and services, while relying on U S WEST to provide the ubiquitous service needed to capture the benefits of an extensive public switched network. Cream-skimming also reduces the economic viability of new entrants that are pursuing a mass market strategy. For example, U S WEST Media Group's cable subsidiary in Atlanta has agreed to serve all the customers who request service in that market, using its ubiquitous cable network in the region. However, this policy is not economically viable if other competitors in that market are able to exploit cream-skimming opportunities.

4. Competitor Analysis

The competitive situation in local exchange markets today is far different than the market for interexchange services following divestiture. When long distance service was deregulated, entry came from companies that were essentially *de novo* entrants, with no brand recognition or positive service reputations. In the local exchange market, however, entry will occur from a number of companies that are already large and well-known communications service providers, and for whom entry will be a product line extension rather than a new product introduction. The

business strategy and economics literature tells us that product line extension is much easier to accomplish than *de novo* entry.² AT&T's entry into the local exchange market, for example, is a natural product line extension of its long-distance and cellular services, taking advantage of its existing customer base. According to recent surveys, AT&T has "a dominant consumer franchise and at least one in ten consumers believes that the telecommunications giant is the provider of their local service now."³

In analyzing how various interconnection rules might affect the post-entry market structure in a LEC's region, it is useful to divide the market participants into four groups: the major IXC's (e.g. AT&T, MCI, Sprint); facilities-based competitors (e.g., cable companies, out-of-area LECs, and other facilities-based entrants such as MFS); minor IXC's and other resellers; and the incumbent LECs. These groups are differentiated by their initial market positions with respect to both customers and regional infrastructure, and the extent to which the firms have established customer brand name recognition.⁴

² Most competitors are expected to compete across a range of services and offer packages of services to consumers. In expanding from its current base, diversification into a related market permits a firm to exploit economies of scope. In her seminal work on diversification of firms, Edith Penrose (*The Theory of The Growth of The Firm*, Oxford: Oxford University Press, 1959, p. 117) cites the importance of specific market expertise and established marketing channels for creating what she calls an "inside track" with customers should a firm become interested in supplying other products to the same consumers. Sharon Oster extends this line of thought by cataloging some of the sources of scope economies that permit leverage into new product lines. (*Modern Competitive Analysis*, New York: Oxford University Press, 1990, p. 184.) These include brand name extension, knowledge about the customers' needs and demand, consumer confidence, established marketing networks, and joint use of physical facilities and a common labor pool. All of these are likely to be operable for incumbent long distance carriers seeking entry into local exchange service markets. Montgomery and Hariharan document empirically the tendency of diversifying firms to enter activities in which the resource requirements are similar to their own resource capabilities. Profit maximizing firms enter lines of business in which they are likely to have the greatest competitive advantage. ("Diversified Expansion by Large Established Firms," *Journal of Economic Behavior and Organization*, Vol. 15, 1991, pp. 71-89).

³ "Chilton Communications Study on \$40 Billion Battle for Local Telephone Service," *Chilton Research Services*, March 15, 1996, p. 2.

⁴ There is a critical distinction between the "mass market" (consisting of residential and very small business customers that require approximately 1-3 lines), the middle market (3-12 lines), and the "multiple-line business market" consisting of customers requiring more than 12 lines). The later market is characterized by more sophisticated buyers who are extremely sensitive to the perceived reliability of the services they purchase, whereas the former are less sophisticated buyers that rely heavily on brand-name recognition developed through mass media advertising and historical legacy, when making their purchase decisions. Our discussion of resale is primarily focused on the mass market. In any event, one should distinguish between entrants who are likely to rely heavily on resale of LEC services (which would be made profitable if prices were set below economic costs) and facilities-based, or partial facilities-based entrants that are likely to use LEC services to fill in missing pieces of their own network.

a. Major IXC's

Major IXC's have many of the same competitive advantages that are ascribed to the LECs, but with fewer strategic constraints. The "big three" facilities-based IXC's (AT&T, MCI, and Sprint) have established reputations, nationally recognized brand names and large customer bases. Many customers already use these entrants for long distance and other services. This implies that the cost to consumers to change from their current local service provider to an IXC provider of local service ("switching costs" in the terminology of economics and strategy) is likely to be very low, since customers are likely to anticipate that these entrants will stay in the market and continue to provide high-quality services.

AT&T already provides inter- and intrastate long distance calling to 80 million US consumers.⁵ MCI was already serving 10 million customers as of the beginning of 1993 with its Friends & Family program alone.⁶ And Sprint, the smallest of the major IXC's, has a long distance customer base of nearly 8 million.⁷ In addition, a recent market survey found that the large long-distance carriers had superior reputations for providing a wide range of telecommunications services compared to the LECs and cable operators. Almost a 30 percent of the residential respondents, and over 40 percent of business users, said they were at least "probably likely" to switch from their local service provider when given the opportunity. In contrast, less than 20 percent of residential users and less than a third of the business users said they would switch from their current long distance service provider to a different IXC in the future.⁸

In competing for local exchange and other telecommunications services, AT&T and other long distance companies can exploit their powerful national brand-name recognition. The IXC's have built this reputation through huge advertising expenditures. For example, AT&T had the number one ranking brand in Advertising Age's "Top 200 mega-brands by 1995 ad spending." MCI ranked 9th in that listing, and Sprint ranked 24th, with a 13 percent increase in advertising

⁵ AT&T 1995 Annual Report, p. 10.

⁶ MCI 1994 Annual Report, p. 12

⁷ Sprint 1995 Annual Report, p. 24.

⁸ "Supplement to Telephony: Customer Care Special," *Telephony*, November 6, 1995, p. 7.

spending dollars from 1994 to 1995.⁹ AT&T, in fact, has one of the best known brand names in America: when AT&T renamed McCaw cellular service to AT&T Wireless, the number of customers inquiring about the service increased tenfold, from 600 to 6000 per week.¹⁰ In fact,

"(t)he AT&T moniker is so powerful that consumers believe they have heard of it in places where it does not exist. As an example, consumers, responding to a poll in which they were asked to identify products that stood out, ranked AT&T Cellular at the top of such a list along with Coca-Cola and Pepsi. Interestingly, there was no AT&T Cellular (at the time of this survey)."¹¹

Sprint and MCI also have strong brand equity. For example, "Sprint is relying on its brand recognition, existing presence and technical and marketing expertise, a Sprint spokesman said."¹² In recognition of the power of its national brand name, Sprint's local telephone operations have now adopted the Sprint name, and, in promoting the Sprint name as a local brand, Sprint has launched a new local advertising campaign featuring the familiar trademarks and personalities of their national advertising campaigns.¹³ Additionally, the first PCS service on the market, in the Washington Metro area, is being marketed under a Sprint brand-name derivative, "Sprint Spectrum."¹⁴

According to a recent survey in *Telephony* about customer service perceptions of telephone and cable companies, the major IXC's will have very substantial advantages in entering markets for local exchange services:

"Our research shows that AT&T, MCI and Sprint, far from being vulnerable to an onslaught by the RHCs, are extremely well-positioned to dominate long-distance, local, cable TV and wireless markets in the near future. We found that many U.S. consumers when asked who their local service provider is still answer, 'AT&T.'"¹⁵

⁹ Craig R. Endicott, "Top 200 Brands," *Advertising Age*, May 6, 1996, p. 34.

¹⁰ "AT&T Eagerly Plots a Strategy to Gobble Local Phone Business," *The Wall Street Journal*, August 21, 1995, p. A1.

¹¹ Kirchhoff, Herb and Murphy, Madeline, *Inside the Competitive Local Exchange*, Telecom Publishing Group, 1995 p. 202.

¹² *Inside the Competitive Local Exchange*, p. 190.

¹³ "Sprint Launches Familiar Weapon in Telecom Brand Battle; Unveils New Image Campaign for Local Division: 'Here's Where it Gets Easier,'" *Business Wire*, May 2, 1996.

¹⁴ Deborah Wayne, "Sprint Spectrum PCS Premiere Garners Early Warm Reception," *Crane Communications, Inc.: Radio Comm. Report*, December 18, 1995.

¹⁵ Steven Titch, "Supplement to Telephony: Customer Care Special, Winner Take All," *Telephony*, November 6, 1995, p. 3.

IXCs also have customer information that allows them to create narrowly targeted product and marketing programs. Knowledge about long-distance usage is valuable for identifying the customers that generate the most revenue and those that are likely to have the highest demand for premium services such as call waiting or voice mail.¹⁶ Entrants without this information will find it more difficult to identify market opportunities, thereby increasing their entry costs relative to the major IXCs.

b. Facilities-Based Competitors

Other potential entrants into local exchange services include incumbent LECs from other service areas, cable companies, companies previously considered competitive access providers (CAPs), and wireless service providers. None of these entrants has the same level of name recognition and reputation within a given local exchange service area as the major IXCs and the incumbent LEC. Many of these companies, however, have some existing infrastructure and, given the right incentives, could enter the market with improved technology. "CAPs", such as MFS, TCG, Phoenix Fiber Link and Electric Light Wave are entering the highest density geographic areas. These facilities-based entrants will focus mostly on business customers. MFS, for example, currently has networks in 45 US cities and plans to increase this number to approximately 85 in the next 3 years.¹⁷ Cable companies can upgrade existing coaxial distribution plant to offer interactive voice, data and video services. With continuing technological innovation and associated cost declines, PCS and stationary wireless will soon become competitive with wireline local exchange services.

c. Minor IXCs and Other Resellers

At least some of the existing long distance resellers will presumably expand into local exchange services in order to provide one-stop shopping to customers. Newly formed resellers

¹⁶ As the Commission is well aware, these enhanced services or vertical functions have high margins which cross-subsidize below cost basic residential local exchange service in many state jurisdictions.

¹⁷ "MFS Announces New Initiatives," *PR Newswire*, May 7, 1996.

may also enter the market, so long as they have some reasonable chance of success. Since few resellers have any brand recognition and typically cannot afford intensive advertising, policies that favor brand name resellers such as AT&T will make it more difficult for non-brand resellers to survive, much less thrive.

d. Incumbent LECs

Many new entrants have a key strategic advantage over incumbent LECs because rather than serve all customers on a non-discriminatory basis they choose which customers to target and which not to serve, whereas the LECs are required by state and federal regulations to offer ubiquitous below-cost basic service at geographically averaged rates on a ready-to-serve basis. Not only are the LECs restricted in their pricing and marketing strategies, they are also encumbered by rules preventing them from offering a full range of telecommunications products (e.g., in region interLATA service). The ability to offer a full range of products enables a firm to offer one-stop shopping to customers, which appears to be a key driver of customer choice in the future.¹⁸ The ability of an incumbent LEC to move quickly into new service regions and to expand into services it does not currently provide (e.g., long distance, cellular) depends on both specific regulatory policies restricting entry and the LEC's financial situation which, in turn, will be affected substantially by other regulatory rules governing, for example, interconnection, access, universal service and the retail prices of basic exchange services.

C. INTERCONNECTION AND LOCAL COMPETITION POLICY ISSUES

1. Call Termination and Interconnection

To illustrate the difference between "call termination" and "interconnection," suppose there are two carriers, red and blue, serving an area, both of which have extensive networks, with local loops reaching every customer's premise. Imagine that John, served by the red carrier, and Sally,

¹⁸ Evidence of this market trend comes from the big three IXCs who are moving toward the one-stop shopping or integrated service concepts by offering a wide range of communications services with bundled service discounts. See section D.

served by the blue carrier, want to be able to call each other. In that situation, the red carrier has a bottleneck to John, and the blue carrier has a bottleneck to Sally. Note that the bottlenecks exist even though the red network extends to Sally and the blue network extends to John, so long as John and Sally subscribe to only one of the carriers, red or blue. Thus, the bottleneck exists even when each competitors' network reaches every customer's premise. Clearly, the "bottleneck" in local exchange services results not from there being a monopoly supplier of local exchange services in the area, but from the fact that each telephone number is served, at any given time, by the end-office switch of only one carrier.

Because of the call termination bottleneck, John and Sally would have to subscribe to the same carrier of local exchange service to be able to call each other. In the n-tuple case of many customers, each customer would have to subscribe to both the blue and red carriers to be assured of having access to all other customers in the area. The bottleneck applies without limit: if there are "m" carriers in an area, each with networks extending to all "n" customers in the area, each customer would have to simultaneously subscribe to all "m" carriers to be able to be ensured of access to all other customers. The only policy necessary to eliminate this "bottleneck" problem is to require all providers of local exchange service to provide non-discriminatory call termination services for calls originating on competing networks. Because the bottleneck exists no matter how many carriers provide local exchange services, all exchange carriers – not just incumbent LECs must practice open access and non-discriminatory call termination policies.

Interconnection, however, may also require the use of a number of other facilities and services. An interconnecting carrier may, for example, choose to buy tandem switching and/or transport services from the incumbent LEC, in order to deliver traffic to the serving end-office of the LEC for call termination. These services are NOT essential facilities, though, because entrants can either economically buy these services from other service providers or construct their own facilities. Hence, the prices of these services should not be separately or specially established by Federal or state regulations for interconnecting local exchange carriers, even though they may be used for interconnection. Rather, these prices should be determined by transactions in the market